

CLIPPEDIMAGE= JP404012330A
PAT-NO: JP404012330A
DOCUMENT-IDENTIFIER: JP 04012330 A
TITLE: ACTIVE MATRIX TYPE LIQUID CRYSTAL DISPLAY DEVICE

PUBN-DATE: January 16, 1992

INVENTOR-INFORMATION:

NAME

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NAME

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N/A

APPL-NO: JP02112639

APPL-DATE: April 30, 1990

INT-CL_(IPC): G02F001/136

US-CL-CURRENT: 349/FOR.111,349/42

ABSTRACT:

PURPOSE: To prevent cracking, film peeling, etc., and to improve barrier effect against alkali ions by varying the composition of the silicon oxynitride film of a surface protective film gently from the silicon oxide film side to the silicon nitride film side.

CONSTITUTION: The surface protective film 20 on a back channel which is buried

by etching is formed in three-layered structure of a silicon oxide film 21, a silicon oxynitride film 22, and a silicon nitride film 23. Then the composition of the silicon oxynitride film 22 is varied gently from the side of the silicon oxide film 21 to the side of the silicon nitride film 23.

Consequently, the localization of an interface potential which is seen on a conventional $\text{SiO}_2\text{-Si}_3\text{N}_4$ interface is eliminated and

small film stress and film thickness reduction are realized; and there is no possibility of film peeling and the uppermost part is formed of the silicon nitride film, so the barrier effect against contamination by and intrusion of alkali ions becomes sufficient.